Asset #57100.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 1 EQ: N**

Asset Type: Constructed Response / Calculator: Non-Calculator
MA-04-1.3.01: Number Operations - Students will analyze real-world situations to identify the appropriate mathematical operations, and will apply operations to solve real-world problems with the following constraints: add and subtract whole numbers with four digits or less, multiply whole numbers with two digits or less, divide whole numbers with three digits or less by single-digit divisors (with or without remainders), add and subtract fractions with like denominators less than 10, and add and subtract decimals through hundredths. DOK-2

1. Toby and Jasmine are making cookies for a bake sale.
   - They will put 12 cookies on each pan.
   - They will bake 8 full pans of cookies.

   a. How many cookies will Toby and Jasmine bake? Show or explain how you found your answer.
   b. Toby and Jasmine will sell the cookies in bags. They will put 3 cookies in each bag. How many bags will they need for all of their cookies? Show or explain how you found your answer.
   c. They are going to sell the bags of cookies for 25¢ each. How much money will Toby and Jasmine make if they sell all of the bags of cookies? Show or explain how you found your answer.

   BE SURE TO LABEL YOUR RESPONSES a, b, AND c.

Asset #57100.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 1 EQ: N**

Scoring Guide

Score	Description
4	The student response demonstrates an exemplary understanding of the Number Properties and Operations concepts involved in applying multiplication and division of whole numbers to solve real-world problems.
3	The student response demonstrates a good understanding of the Number Properties and Operations concepts involved in applying multiplication and division of whole numbers to solve real-world problems. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Number Properties and Operations concepts involved in applying multiplication and division of whole numbers to solve real-world problems. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Number Properties and Operations concepts involved in applying multiplication and division of whole numbers to solve real-world problems.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

Part a: $12 \times 8 = 96$

Part b: $9 \div 3 = 32$

Part c: $32 \times 25 = 800\ ¢$

16.

(a) 96 cookies will be made I found this out by multiplying the number of cookies per pan by the number of pans.

(b) 32 bags will be needed I found this out by dividing the number of cookies by the number of cookies in bags.

(c) $8.00 will be made I found out this by takeing the number of bags and multiplying it by 25¢.

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401330199 4	**Response Code:** MA02116	

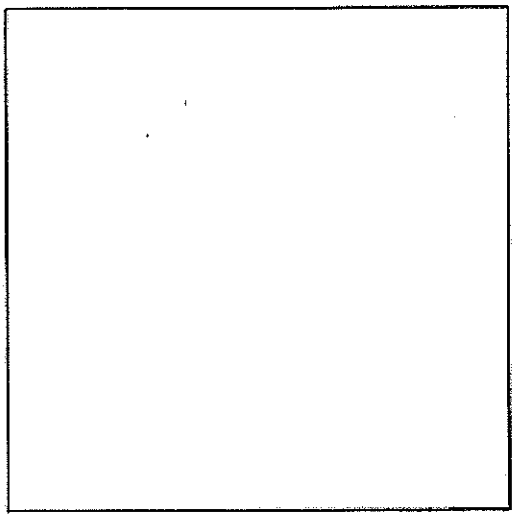
4 A

A

15. a = 96 cookies

b = 32 bags

c = $8.00 dollars



Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401332748 3	**Response Code:** MA02116	

1

1

1

3 pts all ans.

(3)

A

16. A- Toby and Jasmine will bake 72 Cookies because you multiply 12 x 8 and get 72.

B- Toby and Jasmine will need 24 bags because you divide 3 into 72 and get 24.

C- They will make $600 because you have to multiply 24 by 25 and you will get $600 but you have to put Your decimal.

2
24
x25
120
48
600

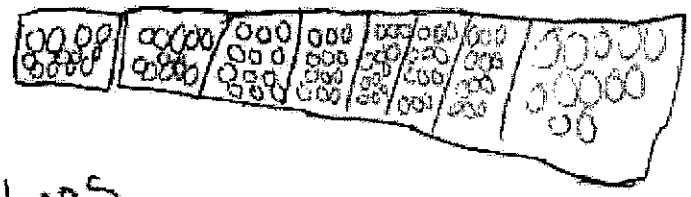
Contract: 6351 Math		**Grade:** 04	**Content:** Math
Booklet: 1401333393	3	**Response Code:** MA02116	

1 - strat.
2 - based on a
2 - based on b
5

(3)

A

16. A 96



B 33 bags

$5.00 = 20
+ 32.5
$8.25 = 33

C

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401333044 2	**Response Code:** MA02116	

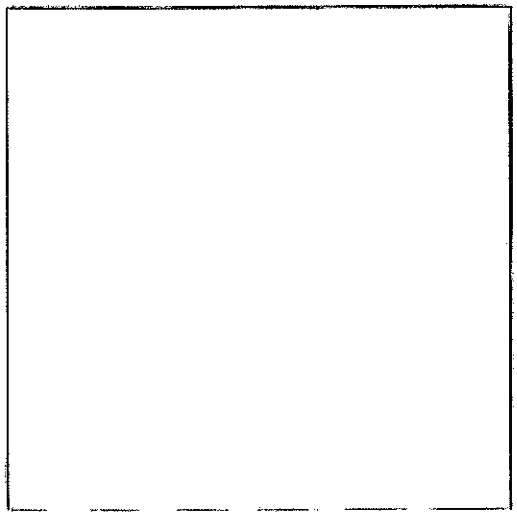
2
2
2
4

(2)

A

Answer Space

16. (a.) $\begin{array}{r} 12 \\ \times\ 8 \\ \hline 96 \end{array}$ (b.) $\begin{array}{r} 32 \\ 3\overline{)96} \\ -9\downarrow \\ \hline 06 \\ -\ 6 \\ \hline 0 \end{array}$ (c.) $\begin{array}{r} {\scriptstyle 1\ 3} \\ \$96 \\ \times\ .25 \\ \hline 480 \\ +1920 \\ \hline \$24.00 \end{array}$



Contract: 6351 Math		**Grade:** 04	**Content:** Math
Booklet: 1401333644	2	**Response Code:** MA02116	

2
2
0- wrong strat. - not based on 6
4

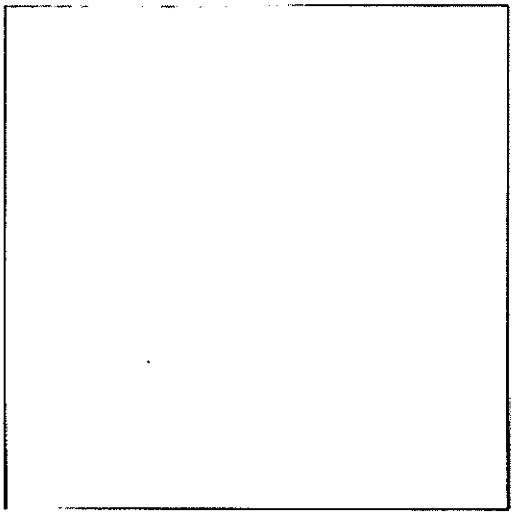
(2)

T

18. a) They will bake 96 cookies. I found the answerwer by doing 8 times 12.

b) They need 92 bages. I divided 96 by 3.

C) They will make $23.00. I timesed 92 by 25¢.



Contract: 6351 Math		**Grade:** 04	**Content:** Math
Booklet: 1401331663	2	**Response Code:** MA02116	

2
1 - strat
- strat
1/4

(2)

A

Answer Space

16.

a

12
× 8
96

96 cookies

b

96
× 3
288

288 bags

c

288
× 25
1440
5760

39.90 $

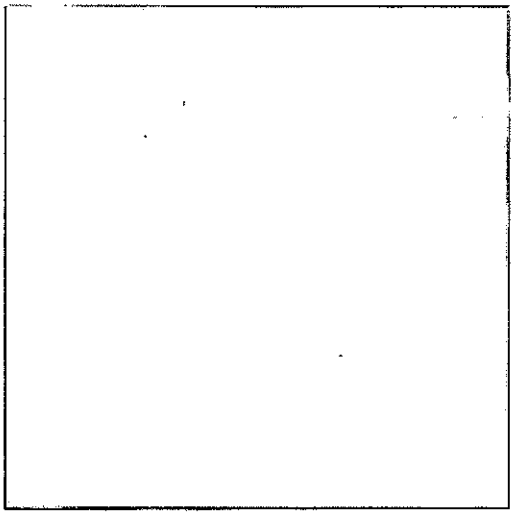
Contract: 6351 Math | Grade: 03 | Content: Math
Booklet: 1302100019 | Response Code: MA02216

2
0
1 - based on b - strat
3

(1)

A

16. a.30
b.40
c. 1/95



Contract: 6351 Math	0	**Grade:** 04	**Content:** Math
Booklet: 1401332727		**Response Code:** MA02116	

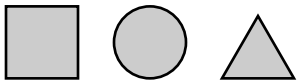
19

A

Asset #57101.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 2 EQ: N**

Asset Type: Constructed Response / Calculator: Calculator
MA-04-5.3.01: Equations and Inequalities - Students will model real-world situations with simple number sentences (equations and inequalities) with a variable or a missing value, and apply number sentences to solve real-world problems. DOK-2

2. Ms. Deering's class is playing store using the shapes shown below.



Each shape stands for a different number of cents. Use the clues below to find how many cents each shape is worth.

Clues

$3 \times \square = 18¢$

$\bigcirc + \triangle + \triangle + \triangle = 6¢$

$\square + \bigcirc + \triangle = 10¢$

a. How many cents is each shape worth? Show or explain how you found your answers.
b. Imagine you want to buy a card that costs 25¢ using the **fewest** number of shapes possible. Tell which shapes you should use.

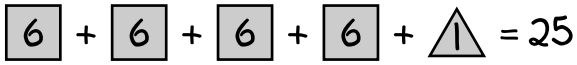
Asset #57101.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 2 EQ: N**

Scoring Guide

Score	Description
4	The student response demonstrates an exemplary understanding of the Algebraic Thinking concepts involved in using variables and simple number sentences to solve real-world problems.
3	The student response demonstrates a good understanding of the Algebraic Thinking concepts involved in using variables and simple number sentences to solve real-world problems. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Algebraic Thinking concepts involved in using variables and simple number sentences to solve real-world problems. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Algebraic Thinking concepts involved in using variables and simple number sentences to solve real-world problems.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

Part a: The square is 6 because $3 \times 6 = 18$. The triangle is 1 and the circle 3 because 3 triangles plus one circle equals 6. And that works because then the last number sentence is also true.

Part b: 4 squares and 1 triangle 

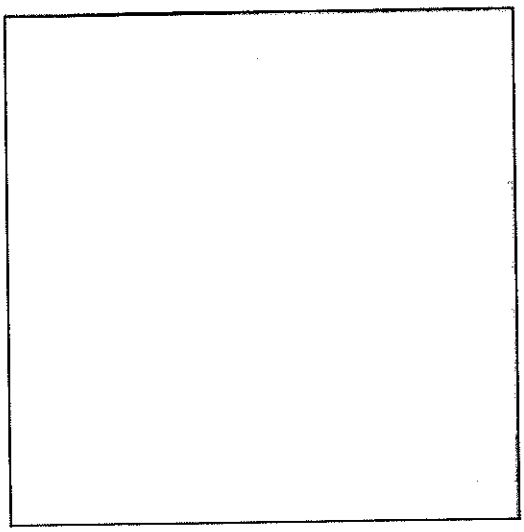
Answer Space

16. a. $3 \times \boxed{6} = 18$

(3) + 1 + 1 + 1 = 6

$\boxed{6} + (3) + 1 = 10$

b. four squares
1 triangle



Contract: 6351 Math | Grade: 03 | Content: Math

Booklet: 1306040137 4 | Response Code: MA06216

4
1
5

(4)

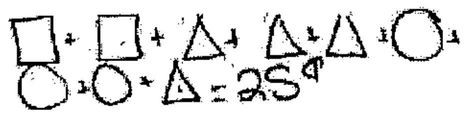
(4)

T

Answer Space

16.

Square = 6¢
circle = 3¢
triangle = 1¢



1
12
+ 4
9

25¢

Contract: 6351 Math	**Grade:** 03 **Content:** Math
Booklet: 1306040048 3	**Response Code:** MA06216

3
1/2
---
3 1/2   (3)

3
0.5

3.5   (3)

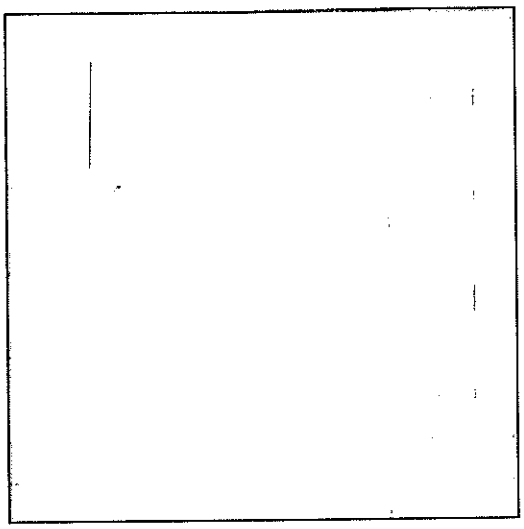
T

Answer Space

16. 3x6=18¢

3+1+1+1=6¢

6+3+1=10¢



Contract: 6351 Math Grade: 03 Content: Math
Booklet: 1306040391 0?3? Response Code: MA06216

(2) 6¢

4
0
4 (3)

4
0
4 (3)

T

Answer Space

16. You would use 5 □.

□ = 5
Δ = 2
○ = 3

Contract: 6351 Math Grade: 03 Content: Math
Booklet: 1306040412 2 Response Code: MA06216

1 - leg.
1/2 (2)

1
1 - based ma
1/2 (2)

Answer Space

16. A square is six cents. A triangle is one cent. A circle is three cents. Three times six equals eighteen¢. 3+1+1+1=6¢. 6+3+1=10¢. Three squares + one triangle

Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1306040046 3	**Response Code:** MA06216	

3 + 4 lines are justification → 3 - ans. only

4
0
4 ③

② SL

3
0
3 ③

T

Answer Space

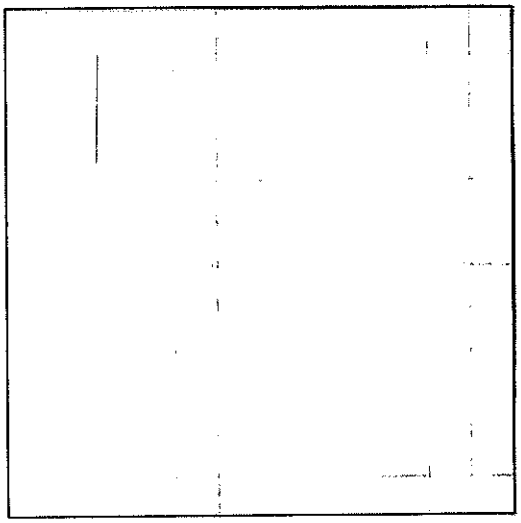
16.

a. $\Delta = 5$

$O = 10$

$\square = 18$

b. O O Δ



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1306040169	**Response Code:** MA06216	

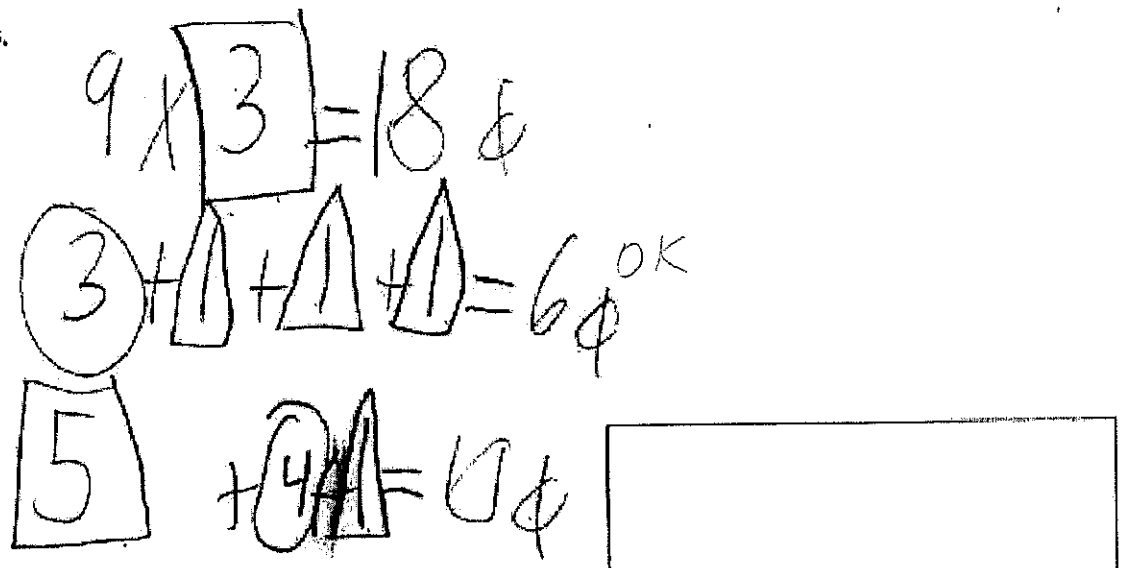
0 - based ma

OK → 1/1 (1)

T

Answer Space

16.



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1306040348 2	**Response Code:** MA06216	

1 equation correct — (1) SL

Kid uses different values for symbols in diff eq. — minimal

2/2 (2)

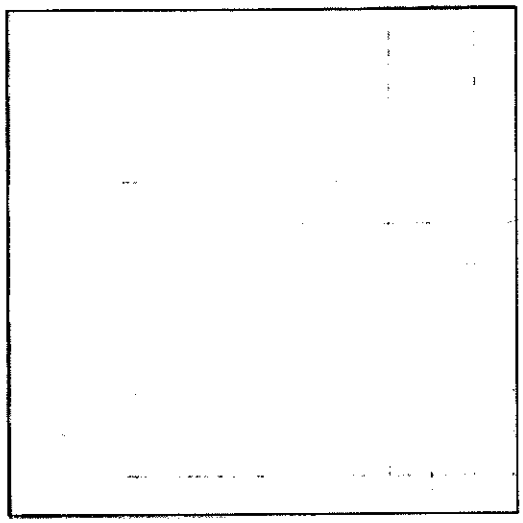
A

Answer Space

16.

□ = 9¢ ○ = 4¢ △ = 1¢

3 X □ + ○ + △ ○ △ = 25¢



Contract: 6351 Math | **Grade:** 03 | **Content:** Math

Booklet: 1306040579 | **Response Code:** MA06216

A

0 – req. satisfied

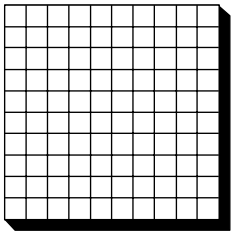
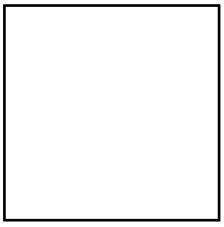
0 / 0 (0) 1/2

1 / 0 / 1 (1)

Asset #57105.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 3 EQ: N**

Asset Type: Constructed Response / Calculator: Calculator Neutral
MA-04-1.1.01: Number Sense - Students will apply multiple representations (e.g., drawings, manipulatives, base-10 blocks, number lines, expanded form, symbols) to describe whole numbers (0 to 99,999), commonly used fractions through tenths and decimals through hundredths, apply these numbers to represent real-world problems, and explain how the base-10 number system relates to place value. DOK-2

3. To answer this question, you will be drawing pictures of place-value pieces.

- To show a hundreds piece,  , draw a square like this: 
- To show a tens piece,  , draw a line like this:
- To show a ones piece, ❑, draw a large dot like this: ●

a. Draw place-value pieces that show the number 462.
b. Draw place-value pieces that show the number 307.
c. Imagine that you have hundreds pieces and ones pieces but **no** tens pieces. Draw place-value pieces that show 513 without using any tens pieces.
d. You may use hundreds, tens, and ones pieces. Draw place-value pieces to show **three different ways** to show 213.

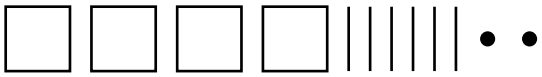
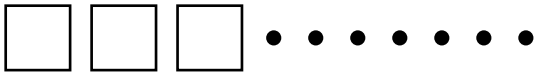
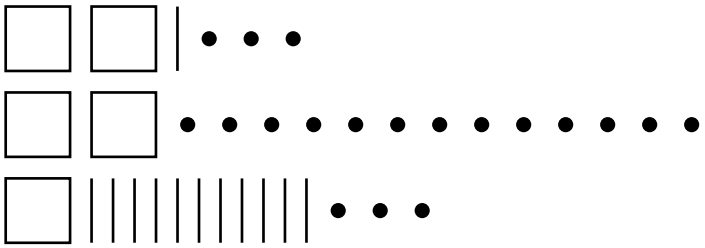
BE SURE TO LABEL YOUR RESPONSES a, b, c, AND d.

Asset #57105.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 3 EQ: N**

Scoring Guide

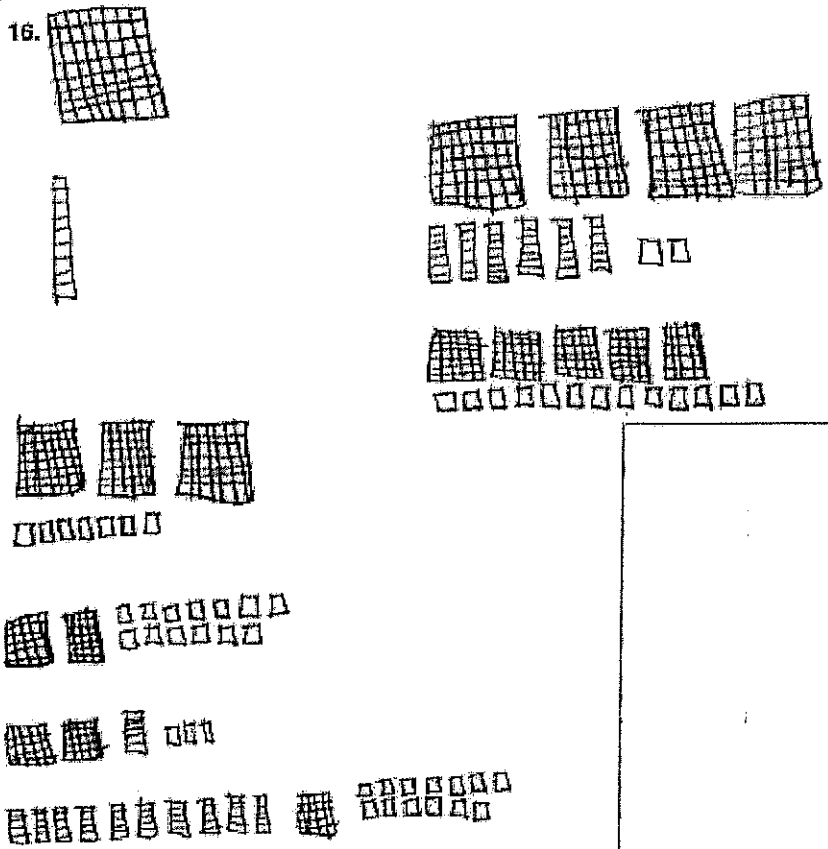
Score	Description
4	The student response demonstrates an exemplary understanding of the Number Properties and Operations concepts involved in applying base-10 blocks to represent whole numbers.
3	The student response demonstrates a good understanding of the Number Properties and Operations concepts involved in applying base-10 blocks to represent whole numbers. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Number Properties and Operations concepts involved in applying base-10 blocks to represent whole numbers. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Number Properties and Operations concepts involved in applying base-10 blocks to represent whole numbers.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

Part a:	
Part b:	
Part c:	
Part d	

Answer Space

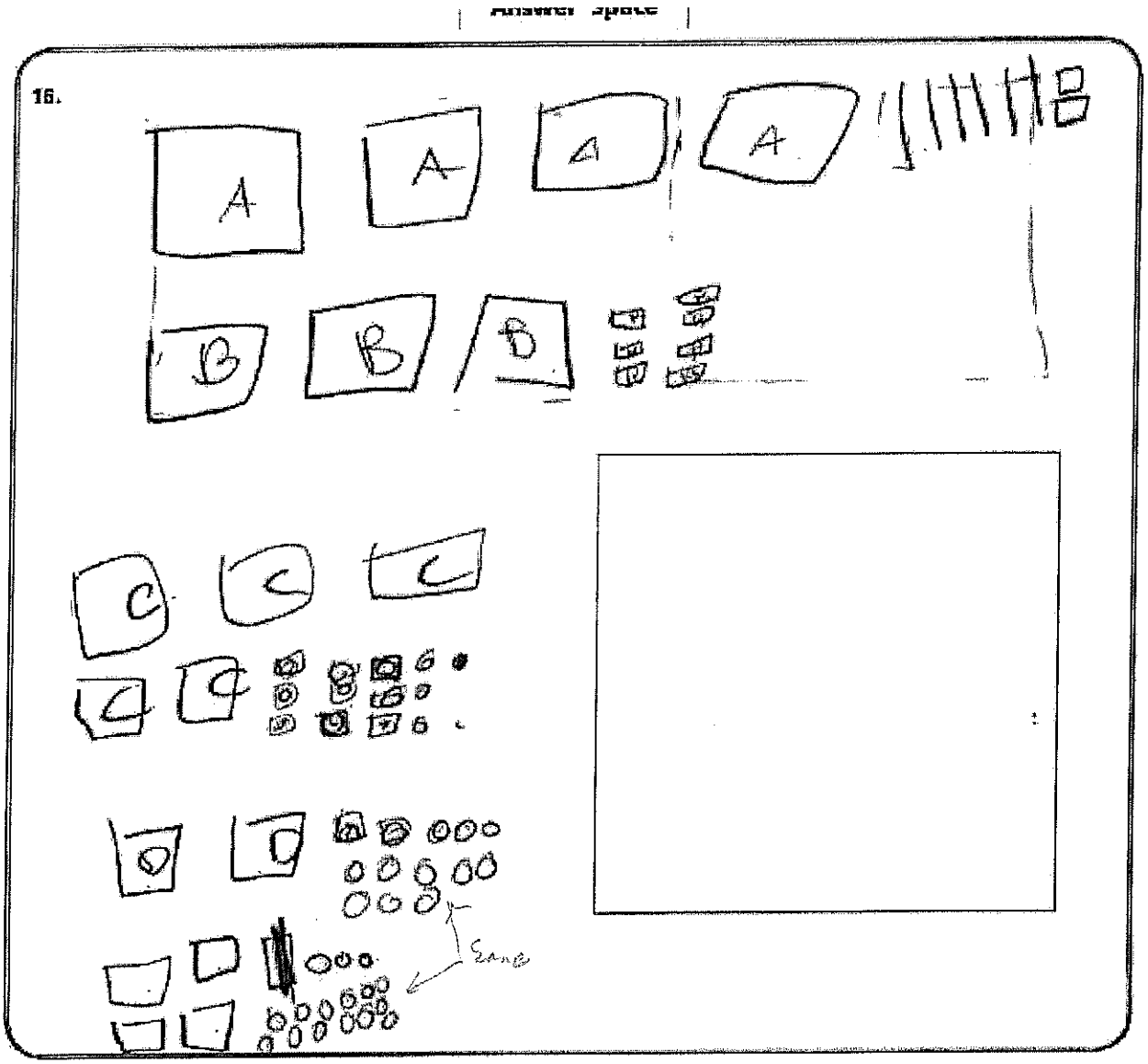
16.



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1303100149	**Response Code:** MA03216	
comments go here. 4		

4

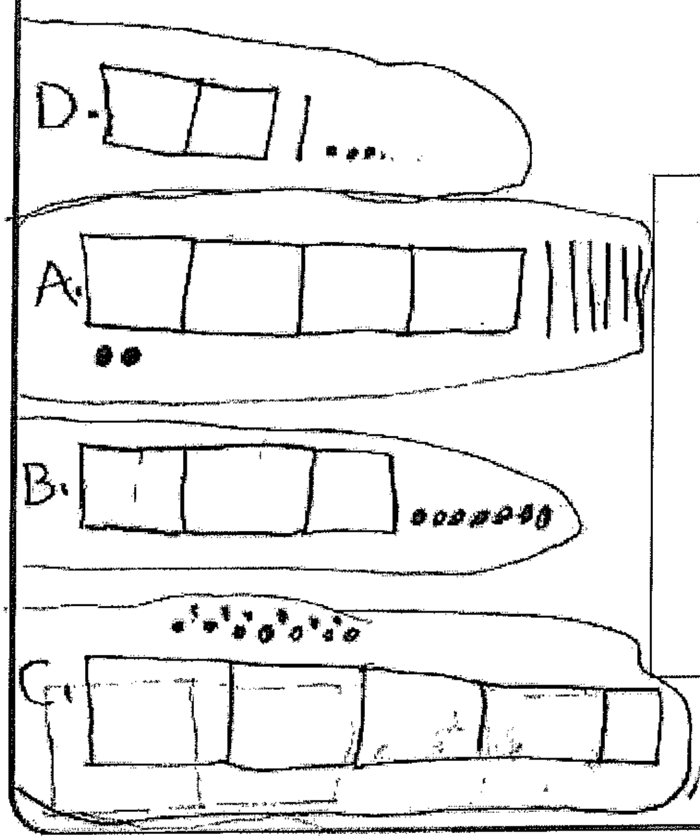
A



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1303100136	**Response Code:** MA03216	
comments go here.3		

Answer Space

16.



Contract: 6351 Math **Grade:** 03 **Content:** Math

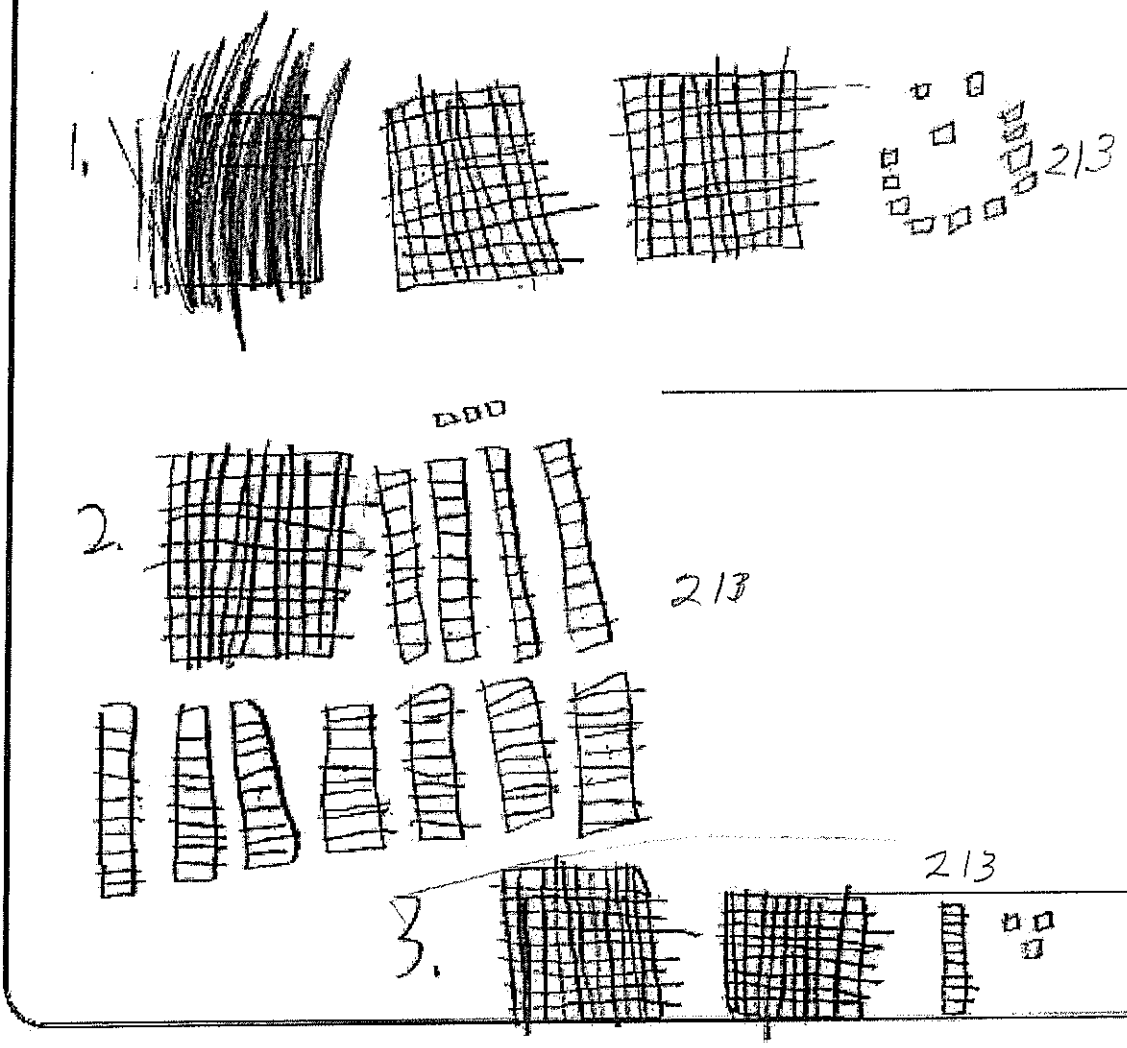
Booklet: 1303100120 **Response Code:** MA03216

comments go here.2

a – 1
b – 1
c – 1
d – 0
3 pts

A

16. D

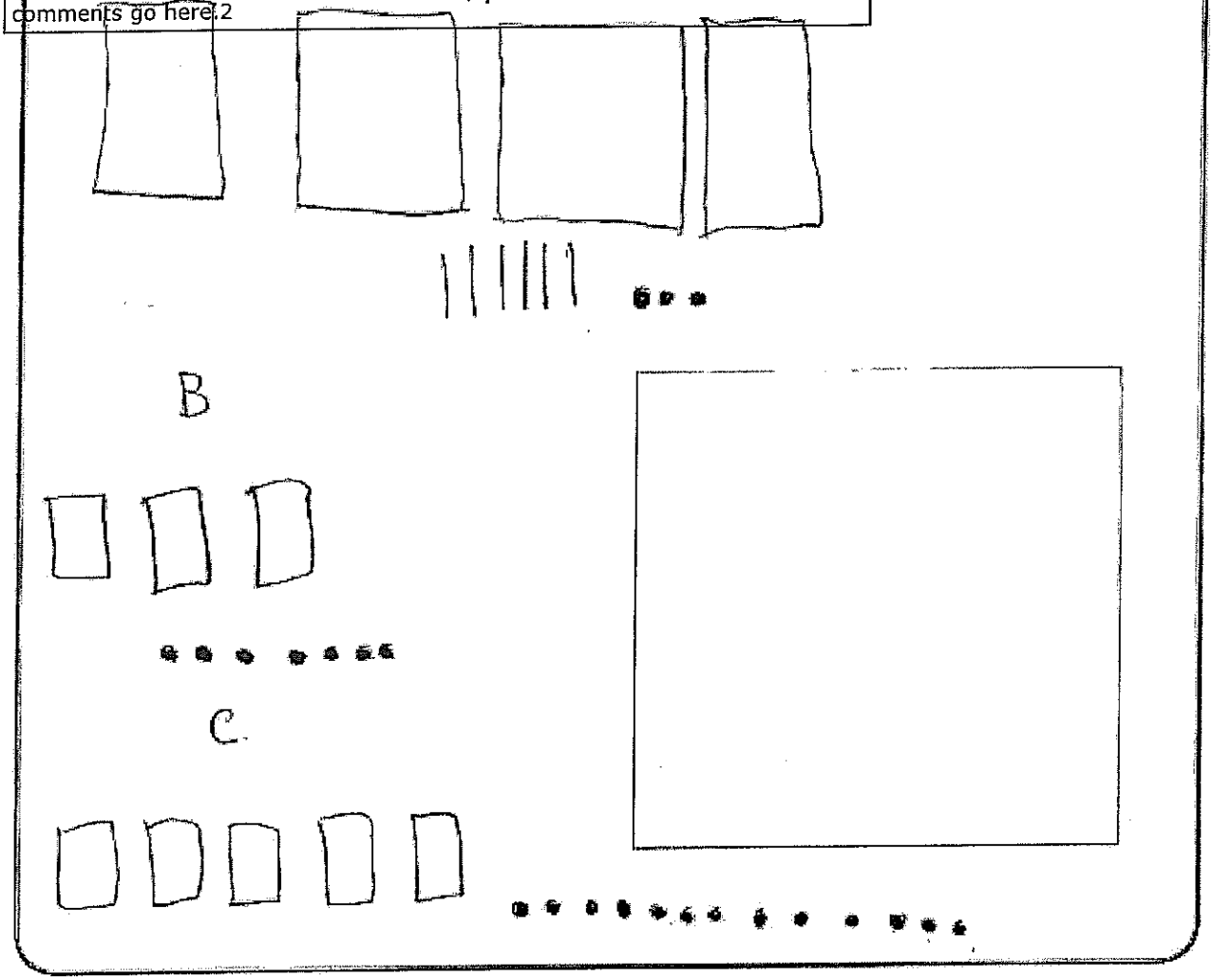


Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401332469	**Response Code:** MA03116	
comments go here.2		

Contract: 6351 Math **Grade:** 04 **Content:** Math

Booklet: 1401332630 **Response Code:** MA03116

comments go here 2



Answer Space

16.

(C) 100 + 13 = 113

(d) 2 hundred pieces + 13 pieces = 213
20 ten Peices + 13 one pieces = 213
1 hundred piece + 20 tens + 13 ones = 213

(A) 462
(B) +307
769

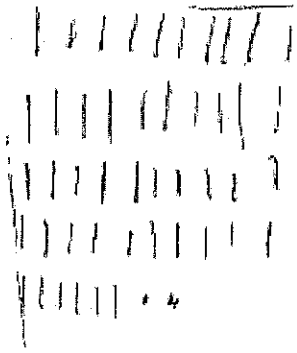
462
+307
769

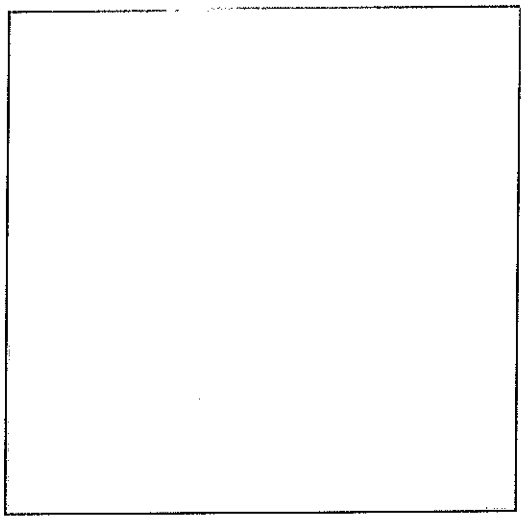
Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1303100202	**Response Code:** MA03216	
comments go here.		

d only

A

16.

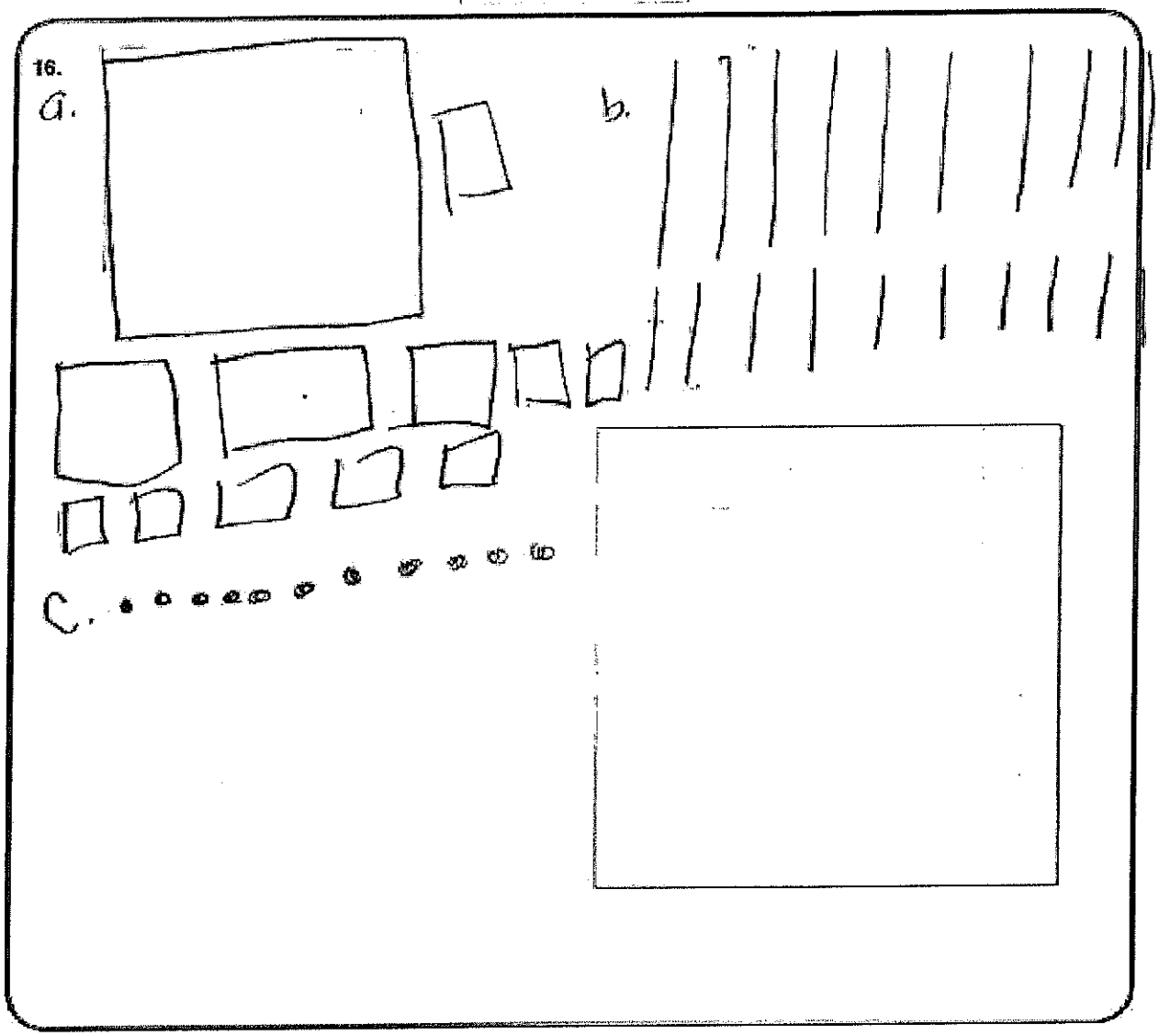




Contract: 6351 Math **Grade:** 04 **Content:** Math

Booklet: 1401332856 **Response Code:** MA03116

comments go here. 1



Contract: 6351 Math **Grade:** 03 **Content:** Math

Booklet: 1303100225 **Response Code:** MA03216

comments go here.zero

Asset Type: Constructed Response / Calculator: Calculator Neutral
MA-04-3.2.01: Transformations of Shapes - Students will describe and provide examples of line symmetry in real-world situations or will apply one or two lines of symmetry to construct a simple geometric design. DOK-2

4. The letters of the alphabet are shown below.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a. List **three** letters that have **no** lines of symmetry.
b. List **three** letters that have **only one** line of symmetry. Draw a dotted line on each letter you listed to show the line of symmetry.
c. List **two** letters that have at least **two** lines of symmetry. Draw dotted lines on each letter you listed to show the lines of symmetry.

BE SURE TO LABEL YOUR RESPONSES a, b, AND c.

Asset #57107.000 **6380 - KY - Green River, Mathematics, Grade 4, SEQ #: 4 EQ: N**

Scoring Guide

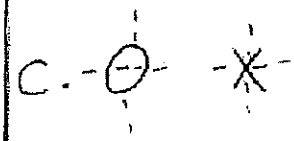
Score	Description
4	The student response demonstrates an exemplary understanding of the Geometry concepts involved in identifying lines of symmetry.
3	The student response demonstrates a good understanding of the Geometry concepts involved in identifying lines of symmetry. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Geometry concepts involved in identifying lines of symmetry. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Geometry concepts involved in identifying lines of symmetry.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

Evaluate correctness of response based on student's indication of letter style, e.g., "X" might be drawn with the line of intersection closer to the top of the letter and thus only have 1 line of symmetry. If student uses style of letters provided in the item, the following responses would be correct.
Part a: 3 of the following letters: **F, G, J, K, L, N, P, Q, R, S, Z**
Part b: 3 of the following letters with 1 line of symmetry drawn: **A, B, C, D, E, M, T, U, V, W, Y**
Part c: 2 of the following letters with at least two correct lines of symmetry drawn: **H, I, O, X,**

16. A. P, F, L

B. B K E

C. 

Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040193	**Response Code:** MA09216	
4		

Note: in part b., student's "K" is drawn in a symmetric way, with a correct line of symmetry. Therefore, it is not a wrong letter.

all correct

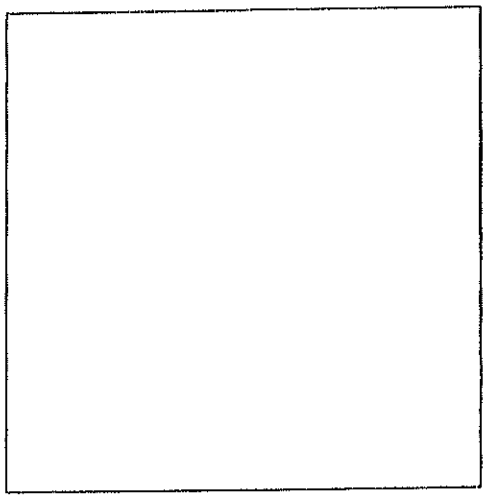
4

16.

a. F, G, J

b. A, B, C

c. H, I



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040209	**Response Code:** MA09216	
4		

All correct

1.5
3.0
3.0
7.5 → (4)

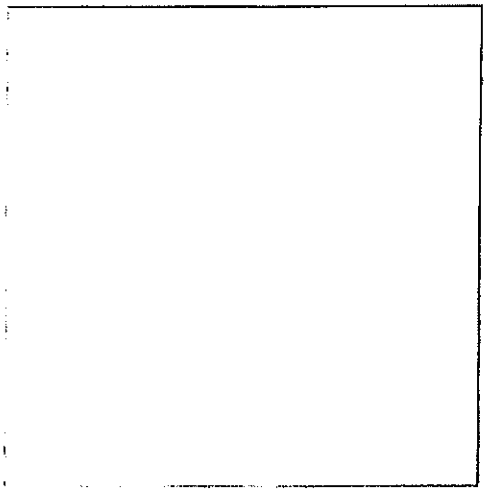
A

16. F, G, L 1.5

A, B, C 1.5

H, X 1.0

4



Contract: 6351 Math **Grade:** 03 **Content:** Math

Booklet: 1309040150 **Response Code:** MA09216

2

(3) SL

All letters correct, No lines of symmetry.

1.5
1.5
1.0
4.0 → (2)

A

16.

A. F J Q

B. A C

C. O I

1.5
3
1

Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040007	**Response Code:** MA09216	
3		

1.5
3
1
5.5 → (3)

2 correct letters,
no lines of symmetry
2 × ½ = 1

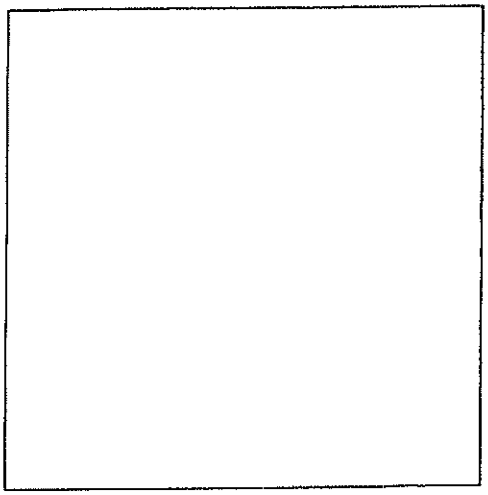
T

16.

a A F F has no lines of symmetry 0

b B E M 1 line of symmetry 3

c X O Q 2 lines of symmetry 1.5



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040155	**Response Code:** MA09216	
2		

a. Only F is correct

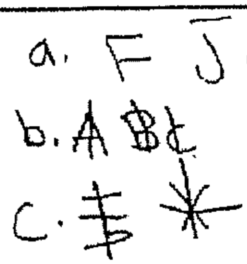
b. 3 correct letters with correct lines of symmetry.

c. 2 correct letters, with correct lines of symmetry, 1 incorrect letter (Q).

0
3.0
1.5
4.5 → (2)

A

16.



1½

½

3

Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040014	**Response Code:** MA09216	
3		

(2)

b. 3 correct letters, no incorrect letters, with incorrect lines of symmetry.

c. read as "I" and "X" with correct lines of symmetry.

1.5
0.5
3.0
———
5.0 → (3)

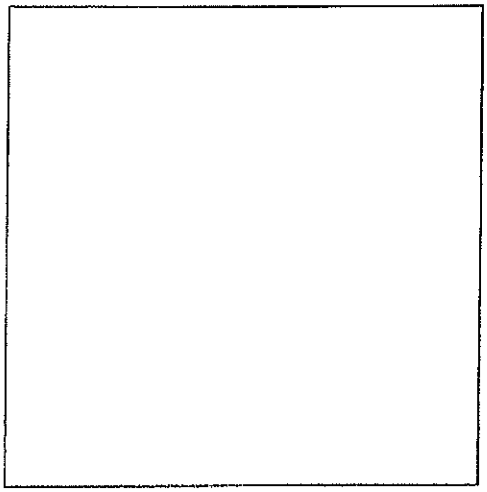
T

16.

L S O ½

Z N Q 0

Y X 0



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040167	**Response Code:** MA09216	
1		

a.) "O" is incorrect

b.) All 3 letters are wrong

c.) 1 correct letter, 1 incorrect letter.

0.5
0
0
0.5 → (1)

A

16.

G J L	1.5
R S U	0
Q M F	0

Contract: 6351 Math **Grade:** 03 **Content:** Math

Booklet: 1309040148 **Response Code:** MA09216

1

a, 3 correct letters

b. Only "U" is correct

c. Only "O" is correct.

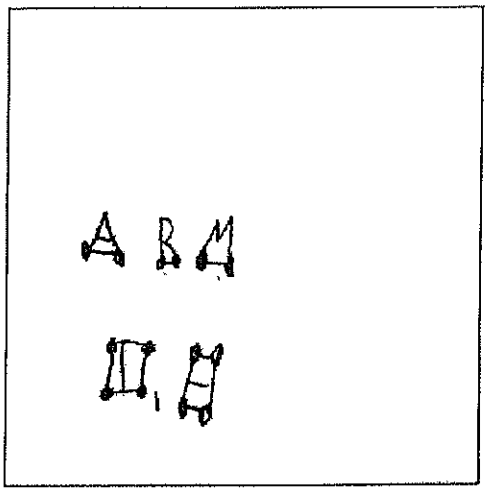
} 1 correct letter with 2 incorrect letters is zero points.

1,5
0
0
1.5 → (1)

A

16.

A, J, C, S .5
B, A, R, M .5
C, I, H 1



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040074	**Response Code:** MA09216	
1		

a. 2 correct letters, 1 incorrect. 0.5

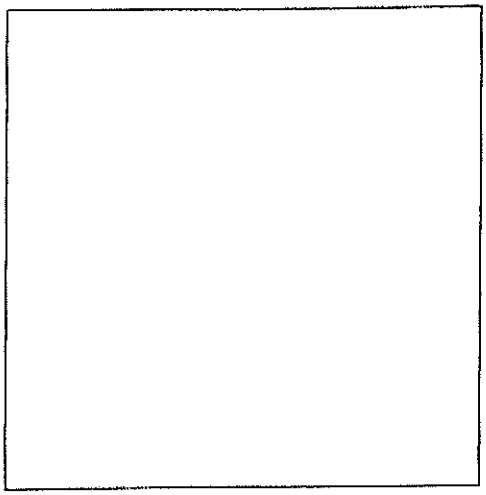
b. 2 correct letters, 1 incorrect but all lines are symmetry are wrong. 0

c. 2 correct letters, none incorrect, with incorrect lines of symmetry. 0.5

1.0 → (1)

T

16 A ∅ ∪ S 0
B Q ∩ A 0
C T V X 0



Contract: 6351 Math	**Grade:** 03	**Content:** Math
Booklet: 1309040152	**Response Code:** MA09216	
0		

Only 1 correct letter (with 2 incorrect letters) in all 3 parts. { 0, 0, 0 }

∅

A